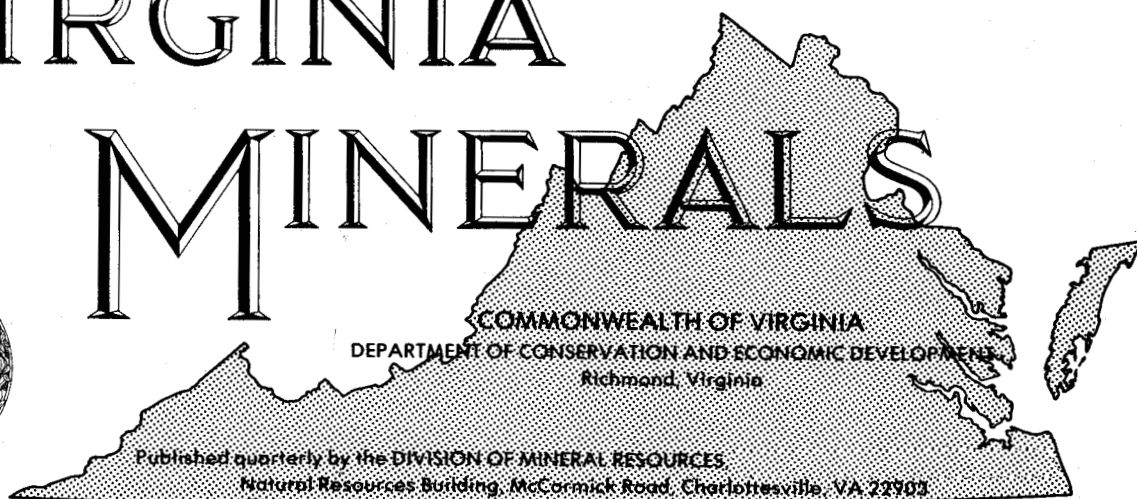


VIRGINIA MINERALS



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GOLD OCCURRENCES IN VIRGINIA, AN UPDATE

Palmer C. Sweet and David Trimble

Gold was first discovered in Virginia in 1806 at the Whitehall mine in Spotsylvania County. Several lode mines near the falls of the James River in Amherst County as well as several placer mines were opened in other parts of the State around 1825 (Sweet, 1971). In the early 1800's gold mining in Virginia consisted of extraction from shallow saprolites and from placer deposits. The first gold mine company incorporated in Virginia was the Virginia Mining Company of New York which operated at the Grasty mine tract in Orange County from 1831-1834. This area has been operated intermittently since and was last worked by the Lucky Hundred Mineral and Mining Corporation (Figure 1) in 1957 (Sweet, 1975, p. 2). Presently there are pits up to 35 feet in diameter and 15 feet deep and overgrown dumps of vein quartz which contains pyrite; some of this material has recently been assayed and found to contain gold. An old brick stack (Figure 2), which was used to roast the gold-bearing pyrite to release the gold, remains at the site (Sweet, 1980, p. 33). The last reported gold production was as a by-product from the

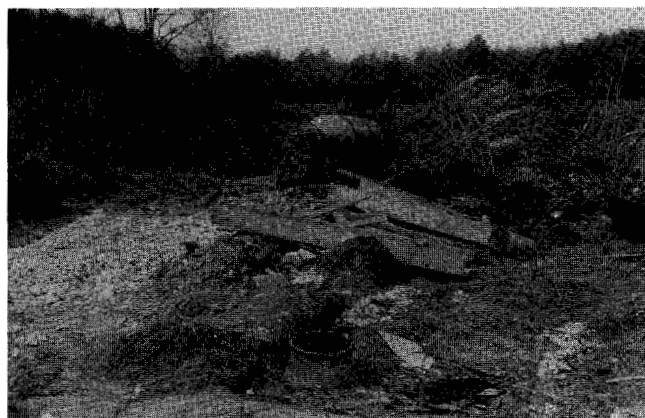


Figure 1. Washer of Lucky Hundred Mineral and Mining Corporation, Dickey tract of Grasty mine area, 1957.

Valzinco zinc, lead and copper mine in Spotsylvania County in 1947. Besides the placer prospecting at the Grasty tract in 1957, other attempts at reviving gold mining in Virginia included an attempt to rework the old dump at the Franklin mine in Fauquier County in the 1960's. Select assays on material from this dump indicate as much as 1.06 ounces of gold per ton and 0.32 ounces of silver per ton (Sweet, 1975, p. 8). A

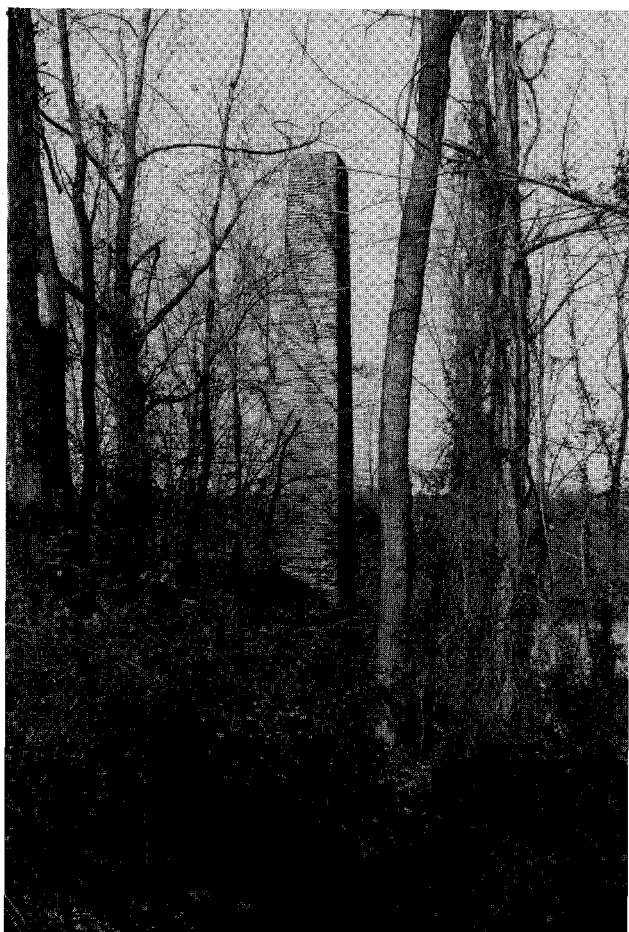


Figure 2. Brick roasting stack looking west at the Grasty mine tract, Orange County.

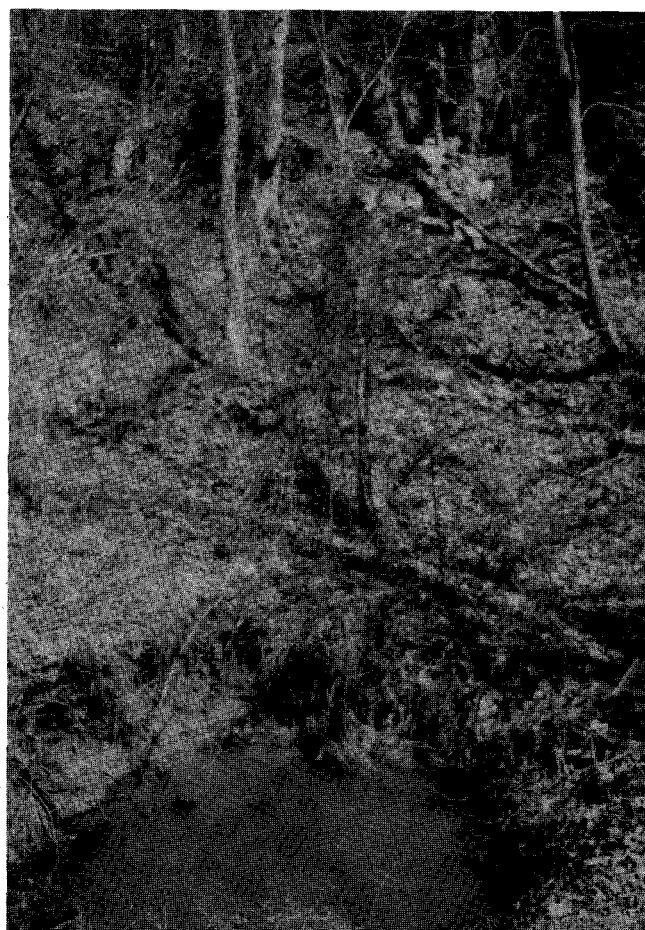


Figure 3. Water-filled shaft at the Culpeper mine, Culpeper County.

quartz vein along Polebridge Creek in Patrick County was also prospected in the early 1960's. Assays of gold-bearing pyrite indicate 1.23 to 5.70 ounces of gold per ton at this site (Colorado Assaying Co.). In 1976 an attempt was made to open the old Culpeper mine (Figure 3) along the northern bank of the Rappahannock River in Culpeper County. Recently a placer prospect in Lunenburg County and a quartz vein along Walnut Creek in Orange County have been opened, and operators have obtained permits with the intention to mine. Walnut Creek Mining, Inc. has opened a commercial panning operation in Orange County.

Because of the increase in the price of gold in the late 1970's there has been a renewed interest in gold panning. Many creeks and tributaries that drain the old mining areas have yielded small pieces (approximately 6,000 to an

ounce) of gold. Byrd Creek and its tributaries in Fluvanna and Goochland counties are popular choices as are Mine Run, Wilderness Run and Walnut Creek in Orange County. Gold Mine Branch and Tongue Quarter Creek in Buckingham County were productive in the past; a nine-pound nugget and several one-ounce nuggets have been reported from Tongue Quarter Creek, south of the Morrow Mine (Sweet, 1980, p. 74). Several small nuggets have been found in this vicinity over the last couple of years.

When the price of gold was allowed to fluctuate on the open market beginning in the late 1960's, gold production in the United States rose slightly at first but has shown a continual decline since 1970 (Figure 4). The decrease in production of almost 300,000 ounces in 1973 was probably due to a miner's strike over labor difficulties at the

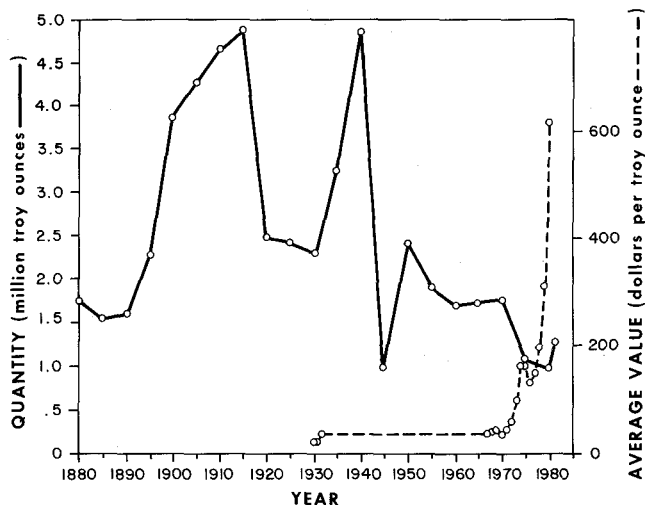


Figure 4. Production and value of gold in the United States.

Homestake mine in South Dakota and the closing of the Cortez mine in Nevada, as its ore grade dropped to 0.214 ounces of gold per ton. Comparison ore-grade values at the Homestake mine and the Carlin mine in Eureka, Nevada, were 0.299 ounces of gold per ton and 0.238 ounces of gold per ton respectively.

Until 1979 the Homestake Mining Company had been the leading domestic producer for half a century except for the war years (1943-1945). The ore grade at the Homestake mine deteriorated to 0.202 ounces of gold per ton by 1977. Since 1979 the leading gold producer has been the Bingham Canyon mine located south of Salt Lake City and operated by Kennecott Copper Corporation which works a copper-gold-silver ore. Domestic gold production in 1980 was 960,000 troy ounces (U. S. Bureau of Mines), the lowest yearly production since 1945 even though the price rose to \$850 per ounce in the early part of the year. In 1981, production rose to 1,245,000 troy ounces because of the opening of some new mines, primarily in Nevada. Production was from about 175 lode and placer mines, mostly in the western United States. Virginia gold production is shown on a cumulative curve (Figure 5).

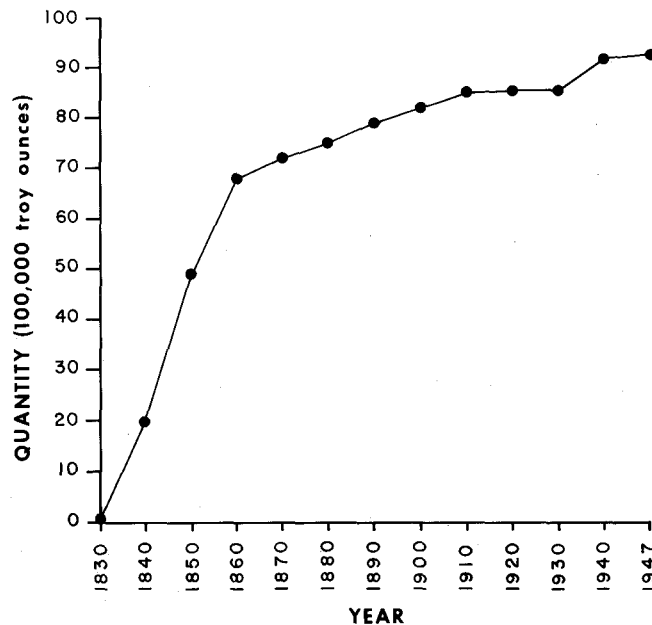
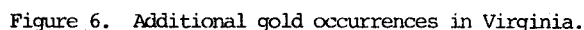


Figure 5. Cumulative gold-production curve in Virginia.

In 1980 the Division of Mineral Resources had records on 244 gold mines and prospects in Virginia (Sweet, 1980). Since then, eighteen additional mines and prospects (Figure 6) have been noted, researched, and field checked and are presented in this paper.

APPOMATTOX RIVER PROSPECT

The Appomattox River prospect is located in Appomattox County, on the Pamplin 7.5-minute quadrangle, 2.3 miles northwest of Hixburg, approximately 0.14 mile off the southwest side of State Road 618, 0.45 mile by road northwest of its intersection with State Road 617. About 15 pits are present over a distance of about 2,000 feet, trending southwest, off the southwest side of the road; the largest pit is 15 feet by 12 feet across and about 6 feet deep. The site was reportedly an old gold mine operated before the Civil War, but very little gold was recovered. Scattered quartz boulders as well as rock fragments were seen over the area with varying amounts of pyrite and iron oxide staining present. Country rock in the area is a schist of the Chopawamsic Formation.



The Colleen mine is located in Nelson County, on the Arrington 7.5-minute quadrangle, 0.4 mile northwest of Colleen, approximately 100 feet off the north side of Virginia Highway 56, 0.3 mile by road east of its intersection with State Road 655. The mine was opened in 1937 by a German named Von Raven (?) and was developed by a 120 foot deep shaft, two tunnels off the shaft that were at least 117 feet long and three underground rooms that were 30 feet square. Reportedly the mine was worked for gold, manganese, platinum, and tungsten. The mine was probably in a quartz vein in the Lovings-ton Formation and was closed in 1939. It is believed that the mining records were destroyed. Only a small dump pile is now visible as the shaft was filled with rock and soil around 1970.

The Concord mine is located in Campbell County, on the Concord 7.5-minute quadrangle, 0.8 mile west of Concord and Virginia Highway 24 and 0.3 mile south of U. S. Highway 460. This mine

DRYBURG PROSPECT

The Dryburg prospect is located in Halifax County, on the Buffalo Springs 7.5-minute quadrangle, on both sides of

State Road 344, 1.1 miles by road southeast of its intersection with State Road 716 at Dryburg. A pit is present in the southwest end of a quartz vein which is about 30 feet wide and dips steeply to the southeast. There are two other quartz veins, en echelon, just to the north; varying amounts of iron-oxide staining are present on the quartz. Several assays of samples from varying sections of the veins indicate approximately one-tenth of an ounce of gold per ton present. Just to the east of the veins are exposures of the grayish-green phyllite and green slate of the upper member of the Aarons Formation.

GILL'S MOUNTAIN PROSPECT

The Gill's Mountain prospect is located in Halifax County, on the Nelson 7.5-minute quadrangle 3.35 miles southwest of Hitesburg, 0.2 mile off the southeast side of State Road 735 approximately 0.7 mile by road southwest of its intersection with State Road 606. Several prospect pits and a trench are present on both sides of Mountain Branch off the northeast side of Gill's Mountain. The pits are about 15 to 20 feet in diameter with a maximum depth of 5 feet. A rim dump as well as boulder size "bull" quartz is present along a northeast-southwest strike. Linden (1981, Fig. 11 p. 33), shows a clear quartz crystal in a sample of "bull" quartz. No metallic mineralization was seen at the site.

J. W. HOLLIDAY PROSPECT

The J. W. Holliday prospect is located in Bedford County, on the Leesville 7.5-minute quadrangle, 3.9 miles north of Brights, Pittsylvania County, and just south of State Road 733, about 0.4 mile south of its intersection with State Road 630. The property was prospected along "Davidson Creek" around 1936 when J. W. Holliday reportedly used a rocker and riffle table to recover a little gold. Some rock was also reportedly blasted out of the nearby

hillside, but apparently no gold was found. The country rock is a Precambrian schist with numerous quartz veins which have a maximum width of 6 feet and a steep angle of dip. Thirteen grab samples taken over the hillside in 1936 averaged 1.13 ounces of gold per ton and 2.09 ounces of silver per ton. The property also has old manganese mines and prospects and abundant quartz fragments with manganese crusts. Manganese mining was considered uneconomical at this site in the 1930's.

HOPEWELL PROSPECT

The Hopewell prospect is indicated as prospect 5 on the Mount Hermon 7.5-minute geologic quadrangle map (Henika, 1977). Pits are located approximately 1.15 miles south-southwest of Hopewell, Pittsylvania County, on the east side of State Road 839 approximately 0.6 mile by road south of its intersection with State Road 718. Five pits (maximum 25 feet wide and 10 feet deep) and an open trench (60 feet long and 15 feet wide) and leaf-covered dumps with mica schist and chunks of vein quartz which contain metallic mineralization are evident. The country rock in the area is muscovite gneiss and schist of the Fork Mountain Formation which is Precambrian in age. Panning has been done in the sand and gravel in the stream to the north, below the pits, and several small particles of gold were separated.

IVY CREEK MINE

The Ivy Creek mine is in Albemarle County, on the Schuyler 7.5-minute quadrangle, 0.9 mile north of Schuyler off the west side of State Road 808, 0.7 mile by road north of its intersection with State Road 800. The prospect was probably worked in the late 1800's or early 1900's and gold was reportedly found although there are no production records. Presently there are at least 20 pits and trenches present; the pits are up to 20 feet in diameter and 20 feet deep, and the trenches are

up to 300 feet long, 20 feet wide and 20 feet deep. One water and trash filled shaft, that is 20 feet deep, is present near the crest of the hill (Figure 7). Bedrock of quartz-biotite gneiss (Charlottesville Formation) containing a white, quartz vein is present in the wall; no metallic mineralization was observed. Quartz float is abundant around the workings and on the dumps. Downhill to the southwest are some concrete foundations and the remains of a tailings pile.



Figure 7. Debris filled shaft with drift at Ivy Creek prospect, Albemarle County.

JOSH GOLD MINE

The Josh Gold mine is located in Louisa County, on the Ferncliff 7.5-minute quadrangle, 3.8 miles northeast of Shannon Hill, 0.25 mile north of

State Road 640 at a point 0.6 mile by road east of its intersection with State Road 697. The mine was operated from 1930 to 1932 by Hershel Shank. Originally it was a placer operation, but after the source of the placer gold was discovered, lode mining took place. All the lode gold apparently came from a quartz vein in an opencut 144 feet long, 10 to 15 feet wide, and 10 feet deep. A tunnel was reportedly dug to the east from this opencut; a shallow ditch now indicates the tunnels probable location, extending about 20 feet east from the trench. A drainage ditch extends from the southwest end of the opencut downhill to the creek. A reported fault at the southwest end of the opencut truncates the quartz vein; the continuation of the vein has never been found. Other trenches and pits were dug in search for this vein or other auriferous quartz veins, but nothing else was found. Most of the trenches are about 10 feet long, 3 feet wide and 2 feet deep, or smaller; several larger trenches are about 70 feet long, 8 feet wide and 4 feet deep. The pits average 4 to 5 feet in diameter and 2 to 3 feet in depth.

The quartz vein in the opencut dips southeast and near the fault it is completely shattered; fragments had been found during mining in which gold held the quartz together. Mr. Shank described the gold as fine grains in the streams and as wire gold and small lenses in the quartz vein. Most of the gold recovered was sent to a geologist in New York(?) for analytical work and was never returned. The samples were reportedly valued at about \$1,000 (H. Shank, 1982, personal communication). The country rock is schist of the Chopawamsic Formation(?).

KENTUCK PROSPECT

The Kentucky prospect is indicated as prospect 2 on the Blairs 7.5-minute geologic map (Henika, 1977) and is located 0.85 mile northeast of Kentucky, Pittsylvania County, and 0.45 northwest

from the end of State Road 987. Local residents indicate that this prospect was worked before the Civil War. Quartz veins are present in the mica-schist and gneiss country rock. A woods road that extends down the southwest side of the hill above Oliver Creek contains numerous pieces of vein quartz that are cobble size and larger. A pit, which has a high rim dump of quartz and schist, is present on the side of the road. Other pits are present across the end of the hill. No visible gold was found in the quartz.

POOLE AND HARRIS MINE

The Poole and Harris mine is located in Halifax County, on the Nelson 7.5-minute quadrangle, about 2.0 miles southwest of Hitesburg and 0.7 mile south of the location reported by Sweet, 1980. Two shafts and a caved pit are located near the crest of the hill west of Big Mountain Branch. Each shaft is surrounded by a covered rim dump; a large covered hillside dump was present at the southernmost shaft. A vertical quartz vein is seen in contact with the greenstone schist in the sidewall of the shaft (Linden, 1981, Figure 9, p.30). A sample taken from the caved pit just southwest of the southernmost shaft has both gold grains within quartz and gold and hematite disseminated within greenstone schist (Linden, 1981, Figures 13 and 15).

RATTLESNAKE MINE

The Rattlesnake mine is located in Stafford County, on the Salem Church 7.5-minute quadrangle, about 2 miles west of Holly Corner 0.8 mile east of the confluence of the Rapidan and Rappahannock Rivers, 0.5 mile south from the end of State Road 752. A caved shaft as well as concrete foundations with upside down bolts are present on the hillside just north of the site of the Eagle mine. Numerous pits and cuts are present and extend for about 1 mile

northeast-southwest on the hillside from the cliff above the Rappahannock River through prospect A (Stafford County) and the Pris-King mine noted in Sweet, 1980. The country rock is a mica schist with quartz veins in the basal section of the Quantico Slate.

ROCKY BRANCH PROSPECT

The Rocky Branch prospect is located in Albemarle County, on the Schuyler 7.5-minute quadrangle, 0.6 mile southeast of Old Dominion, off the southeast side of Virginia Highway 6 along Rocky Branch. Prospecting was done at this site in the 1920's; country rock is in the Swift Run Formation. Division personnel found small pieces of gold during the summer of 1982 in a tributary to Rocky Branch about three-fourths of a mile to the north-northeast.

SYLVAN STEIN PROSPECT

The Sylvan Stein prospect is located in Lunenburg County, on the Meherrin 7.5-minute quadrangle, 3.5 miles southeast of Meherrin, south of the end of State Road 741 approximately 0.7 mile by road south of its intersection with State Road 625. A thin quartz vein trending northeast-southwest in a quartz-mica schist is present in the bank of a tributary which leads southwest into Ledbetter Creek.

TURPIN CREEK MINE

The Turpin Creek mine is located in Buckingham County, on the Dillwyn 7.5-minute quadrangle, 2.2 miles northwest of Dillwyn off the southeast side of Turpin Creek (old Hubbard's Creek.) According to an old plat, the mine was operated before 1836. A northeast trending quartz vein is present, with at least ten pits and caved shafts, an open cut and a trench, 40 feet long, 3 feet wide, and 2 feet deep, cross the

vein at one location; there was no additional evidence of prospecting to the northeast or southwest. Quartz on the dumps contains some pyrite.

WALNUT CREEK MINE

The Walnut Creek mine is located in Orange County, on the Unionville 7.5-minute quadrangle, 2.9 miles northeast of Rhoadesville, 0.45 mile off the south side of State Road 602 approximately 0.7 mile by road east of its intersection with State Road 622. An old prospect is present in a quartz vein in chlorite-sericite schist, which trends northeast-southwest. The quartz vein was open in June, 1982 on top of the hill and extends along strike for about 100 feet (Figures 8, 9); the cut is about 25 feet wide and 15 feet at



Figure 8. Open cut (northeast end) Walnut Creek mine, Orange County.



Figure 9. Southwest end of open cut at Walnut Creek mine, Orange County.



Figure 10. Quartz vein cutting schistosity of chlorite-sericite schist at Walnut Creek mine, Orange County.

its deepest portion. The quartz vein cuts across the schistosity of the country rock (Figure 10). Pyrite is present in the quartz, along with varying amounts of gold, cobalt, and titanium mineralization. Material is being dredged from the bed of Black Walnut



Figure 11. Commercial gold-panning operation at wilderness, Orange County.

Run downhill to the west of the cut for a commercial panning operation set up 10 miles to the east, just southwest of the intersection of Virginia highways 3 and 20 at Wilderness Corner by Walnut Creek Mining, Inc. (Figure 11). Dredged material is put in pans and buckets. These are sold for \$1-\$15.00 to persons working in stationary troughs of water. A rock shop along with instruction books, samples, etc., is also present on the site.

WALT WILLIAMS PROSPECT

The Walt Williams prospect is located in Grayson County, on the Trout Dale 7.5-minute quadrangle, 1.1 miles northeast of Trout Dale, 0.4 mile off the north side of State Road 603 approximately 0.3 mile by road east of its intersection with State Road 627 (Sweet and Bell, 1980, p. 51). Gold was mined from this property in the late 1800's. In early 1978 there was a 12-foot by 8-foot, water-filled shaft in the hillside above the level of the stream. The shaft is in a quartz-pebble conglomerate in the Unicoi Formation that has a north-south strike and a dip of 35° to the west. Black iron-oxide stain is on the silica cement between particles; there was no other visible metallic mineralization. There are also some euhedral pieces of feldspar in the conglomerate. Several other exposures of the conglomerate and sandstone are in the immediate area (Sweet, 1980, p. 5).

J. W. YOUNG PROSPECT

The J. W. Young prospect is located in Page County, on the Elkton East 7.5-minute quadrangle, 5.2 miles east of Shenandoah off the northwest side of State Road 759 approximately 0.45 mile by road southwest of its intersection with State Road 607. The prospect was discovered in quartzite of the Weverton Formation around 1909 by J. W. Young. A 70-foot-long trench, 10 to 15 feet wide with a maximum depth of 10 feet was dug. Mineral rights were sold to Naked Creek Mining Corporation on May 7, 1909;

core holes were drilled, and the deposit was determined to be uneconomical at that time. Gold mineralization was found, but no production ever occurred. An analysis done on "gold ore" from this site before 1932 by the College of William and Mary indicates one pound of gold per ton (Division files). Remnants of the trench remain at the site and some pyrite is present in quartz on the dumps.

REFERENCES

- Henika, W. S., 1977, Geology of the Blairs, Mount Hermon, Danville and Ringgold quadrangles, Virginia: Virginia Division of Mineral Resources Publication 2, 45 p.
- Linden, M. A., 1981, Mineralogical and chemical characteristics of gold occurrences in the Virgilina District, Halifax County, Virginia: Masters, Virginia Polytech Inst. and State University, 116 p.
- Sweet, P. C., 1971, Gold mines and prospects in Virginia: Virginia Division of Mineral Resources, Virginia Minerals, vol. 17, p. 25-33.
- _____, 1975, Road log to some abandoned gold mines of the gold-pyrite belt, northeastern Virginia: Virginia Division of Mineral Resources Virginia Minerals, vol. 21, no. 1, 9 p.
- _____, 1980, Gold in Virginia: Virginia Division of Mineral Resources Publication 19, 77 p.
- _____, 1981, Selected mineral resources in Geologic investigations in the Willis Mountain and Andersonville quadrangles, Virginia: Virginia Division of Mineral Resources Publication 29, p. 70-75.
- Sweet, P. C., and Bell, S. C., 1980, Metallic mineralization in the Blue Ridge province of Virginia, in Contributions to Virginia geology - IV: Virginia Division of Mineral Resources Publication 27, p. 39-52.

BLACK DAMP¹

On April 4, 1978, five men died underground in a coal mine in Dickinson County, Virginia, apparently from black damp. A company spokesman said that it happened when six miners, who were working 80 feet into the mine, drilled a hole from the face of the new mine into an abandoned coal mine that contained water and black damp. Three miners escaped and alerted the Mine Safety and Health Administration, but two rescuers who went in to aid the other three miners who were still underground were asphyxiated along with them.

Black damp, or choke damp, is a non-explosive mixture of carbon dioxide and nitrogen, with little oxygen. It is one of several "damps" referred to by underground miners, and may be either lighter or heavier than air, depending on the proportion of its two constituents.

Before the days of adequate ventilation underground, black damp was a fairly common occurrence. The degree of risk of an accident involving black damp is relatively low today, because most mines are provided with adequate ventilation. Thus the risk is greater in old, abandoned mines. However, black damp is also a hazard in caves and in rock tunneling.

The accident in the Virginia coal mine on April 4, 1978, is classed as a major one because five lives were lost. In the history of U. S. coal mining, only a few major mine disasters have been attributed possibly to black damp, as follows²:

April 27, 1887-Tunnel Colliery, Ashland, Pa.-5 killed.

October 1, 1887-Bast Colliery, Ashland, Pa.-5 killed.

October 23, 1897-Richardson Colliery, Glen Carbon, Pa.-7 killed.

May 6, 1913-Taylor Mine, Beaver Dam, Ky.-5 killed.

The incidence of bituminous coal-mine accidents has decreased dramatically in

the past 20-25 years, from 1000 lives lost per year to only 141 in 1976 and 91 in 1977. Similarly, the number of disabling but nonfatal injuries has decreased, to 14,000 in 1976 and 11,000 in 1977. These numbers resulted in a frequency rate in 1977 of 0.34 fatalities per million man hours and 37.54 disabling injuries (including fatalities) per million man hours; those frequency rates are slightly lower than in 1976. For bituminous coal underground mines the fatality rate underground is slightly higher (0.40) than for all bituminous coal operations, but the rate for all disabling injuries (52.68) is substantially higher. These numbers were based on an average of 126,722 persons working underground.

The degree of risk for a black-damp accident is low compared with that for other types of coal-mine accidents; in fact, black-damp accidents are so uncommon that they are reported under the "miscellaneous" category. In 1977 two-thirds of the fatal accidents in U. S. coal mines were caused by roof falls (33%), haulage (17%), and machinery (17%), and none was caused by black damp. The number of disabling injuries (excluding fatalities), however, showed a different distribution, as follows: handling materials (30%), haulage (16%), machinery (14%), slip or fall of person (11%), roof falls (9%), and hand tools (7%). Only one injury out of 11,000 was assigned to "suffocation."

¹Written by Allen F. Agnew, Senior Specialist Division, Library of Congress Congressional Research Service.

²Keenan, Charles M. "Historical Documentation of Major Coal-mine Disasters in the U. S. not Classified as Explosions of Gas or Dust." U. S. Bureau of Mines Bulletin 616, p. 86-90.

NEW PUBLICATIONS

PUBLICATION 34

The Geology of the Roanoke and Stewartsville Quadrangles, Virginia by Merwin J. Bartholomew has just been released as Publication 34 by the Division of Mineral Resources. The report's 23-page text has detailed descriptions on the stratigraphy, structure, geologic history, economic, and environmental geology of the area.

The report area lies both in the Valley and Ridge and Blue Ridge physiographic provinces. The Blue Ridge fault, a prominent northeast-trending structural feature, forms a natural boundary between the Paleozoic sedimentary rocks of the Valley and Ridge and the crystalline rocks of the Blue Ridge. In the Valley and Ridge portion of the report area the major faults are the Salem, Green Ridge, Pulaski, and Saltville. These names also correspond to four thrust sheets which overlie each of the faults. Clay materials, limestone, and dolomite are currently being produced, and the area has a history of phosphate, pyrite, chalcoppyrite, sphalerite, iron, manganese, and sandstone mining. Problems affecting land modification are also discussed in this report.

The report contains generalized structural maps, block diagrams, and interpretive cross sections and is available from the Division for \$8.90 postpaid.

PUBLICATION 35

The Geology of the Villamont and Montvale Quadrangles, Publication 35, by William S. Henika is now available from the Division of Mineral Resources. The report contains an 18-page text with a geologic map with information on the stratigraphy, structure, mineral resources, and environmental geology of the area. The quadrangles include portions of the Valley and Ridge, Blue Ridge, and Piedmont provinces and rocks of the Precambrian and Paleozoic eras. Dominant

structures in the Valley and Ridge discussed in the report include the Pulaski, Blue Ridge, and Salem thrust sheets and the Peaks of Otter and Glade Creek faults. Limestone, dolomite, and clay materials are currently being produced in the area, and hematite, limonite and manganese oxide ores were produced in the past. Geologic and economic factors affecting land modification of areas underlain by floodplain deposits, crystalline, clastic, and carbonate rocks are also discussed in the report. The report costs \$8.90 postpaid.

PUBLICATION 38

Publication 38, entitled "A Vein-type Uranium Environment in the Precambrian Lovington Formation, Central Virginia," has just been released by the Division. It is a result of a study by Bendix Field Engineering Corporation under contract to the U. S. Department of Energy and was written by Thomas Baillieul and Paul Daddazio.

Seven uranium occurrences, located by aerial and ground surveys, are described in this twelve-page report. The occurrences are mostly within fractured granites of the Lovington Formation in Albemarle and Rappahannock counties. The report can be purchased from the Division for \$3.50 postpaid.

SCHEDULED MEETINGS

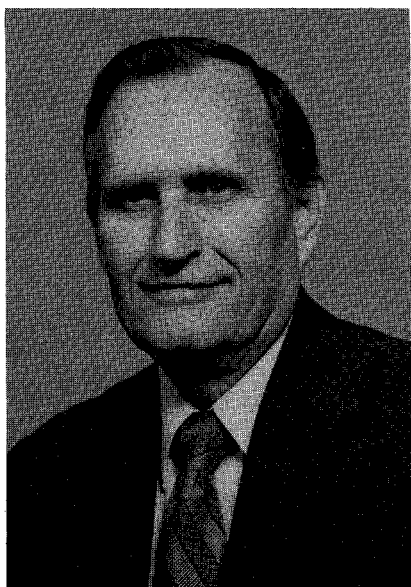
March 16-18, Southeastern Section, Geological Society of America, Tallahassee, Fla. (James F. Tull, Dept. of Geology, Florida State University, Tallahassee, Fla. 32306).

May 13-20, Paleozoic stratigraphy and Appalachian Basin, field seminar, Arlington, Va. (John Dennison, Dept. of Geology, University of North Carolina, Chapel Hill, N.C. 27514).

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LEONARD D. HARRIS
1925 - 1982

With the untimely death of Leonard D. Harris on July 27, 1982, the geologic profession and the U. S. Geological Survey lost an outstanding scientist, and Virginia lost a good friend.

Leonard spent many years working in the southern and central Appalachians. His first works in southwestern Virginia produced a paper on syngenetic chert in Middle Ordovician limestones and a geologic map of the Duffield quadrangle, which he co-authored with Ralph Miller.

His subsequent work in Virginia and adjacent Tennessee was concerned with a wide range of topics, from thin-skinned thrusting to regional stratigraphic variations and depositional environments of Paleozoic strata in the Valley and Ridge. His last half-dozen years were devoted to regional studies of the southern and central Appalachians particularly with regard to the potential for accumulation of oil and gas in the Eastern Overthrust. His final work, which was completed just before he died, was an interpretation of a VIBROSEIS profile from Staunton to Richmond, Virginia. During this study several members of the Division's staff had the opportunity to work with him, providing geological and geophysical data and interpretations.

Leonard was a highly motivated and dedicated geologist who gave more to his profession than it asked of him. He was a competitive individual who always strove to excel in his chosen studies, to be second to no one in terms of quality and quantity of work. Because of these traits and desires, he spent many hours working beyond those required of his employer. He gave freely of himself, his efforts and ideas, to those of us who were fortunate enough to work with him during the past two and one-half decades, and he will continue to be an inspiration to us all as we progress in our own studies of the Appalachians.

R.C.M.